

WHAT IS CLAIMED IS:

1. A transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR, comprising the steps of:
  - determining whether an interval is an interval in which data is being transmitted;
  - comparing the error rate of receive data after decoding and the target error rate and controlling the target SIR in an interval in which data is being transmitted;
  - measuring the error rate of a demodulated receive pilot in an interval in which data is not being transmitted; and
  - controlling target SIR upon comparing the measured error rate of the pilot and target error rate of the pilot.
2. The method according to claim 1, wherein the error rate of a synchronous word contained in a pilot is adopted as the error rate of the pilot.
3. The method according to claim 1, further comprising a step of determining whether an interval is an interval in which data is being transmitted based upon results obtained by decoding demodulated TFCI information.
4. The method according to claim 1, further comprising a step of determining whether an interval is an interval in which data is being transmitted based upon TFCI information that has been demodulated by a modem.
5. The method according to claim 1, further comprising a step of setting the target error rate of the pilot in such a manner that synchronism between the transmitting and receiving sides will not be lost when the target SIR has been lowered upon comparing the measured error rate of the pilot and the target error rate of the pilot.
6. The method according to claim 5, further comprising a step of providing upper and lower limits of the target error rate of the pilot and controlling the target SIR in such a manner that the measured error rate of the pilot will fall within a range defined by said upper and lower limits.

7. The method according to claim 1, further comprising a step of storing target SIR in control before a changeover is made from the control in the interval in which data is being transmitted to the control in the interval in which data is not being transmitted.
8. The method according to claim 7, further comprising a step of storing target SIR prevailing when the measured error rate of the pilot has attained the target error rate, after the changeover is made to the control in the interval in which data is not being transmitted.
9. The method according to claim 7, further comprising a step of storing the difference between target SIR prevailing when the measured error rate of the pilot has attained the target error rate and the stored target SIR, after the changeover is made to the control in the interval in which data is not being transmitted.
10. The method according to claim 7, further comprising a step of setting the stored SIR as target SIR when a changeover is made from the control in the interval in which data is not being transmitted to the control in the interval in which data is being transmitted.
11. The method according to claim 8 or 9, wherein when the change is made from the control in the interval in which data is not being transmitted to the control in the interval in which data is being transmitted, a value obtained by adding the absolute value of the difference between the two stored target SIRs or the absolute value of the stored difference to the target SIR that prevailed prior to the changeover of control is set as the target SIR.
12. A control method for controlling a transmitter so as to make a measured reception quality approach a target quality, wherein if a data signal is not contained in a prescribed receive interval and a pilot signal is contained in said interval based upon format information of a received receive signal, the target quality is controlled based upon the pilot signal, and if a data signal is contained in the prescribed receive interval, the target quality is controlled based upon the data signal.
13. A transmission power control apparatus for comparing error rate of receive data and target error

rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR, comprising:

- 5           a modem for demodulating a receive signal;  
          a data existence determination unit for determining whether an interval is an interval in which data is being transmitted;
- a decoder for decoding receive data;
- 10          a first target-SIR controller for comparing the error rate of receive data after decoding and the target error rate and controlling the target SIR in an interval in which data is being transmitted; and
- a second target-SIR controller for measuring the
- 15 error rate of a receive pilot, which has been demodulated by said modem, comparing the measured error rate of the pilot and target error rate of the pilot and controlling the target SIR in an interval in which data is not being transmitted.
- 20 14. The apparatus according to claim 13, wherein said second target-SIR controller adopts the error rate of a synchronous word contained in a pilot as the error rate of the pilot.
- 15. The apparatus according to claim 13, wherein said
- 25 data existence determination unit determines whether an interval is an interval in which data is being transmitted based upon results obtained by decoding demodulated TFCI information.
- 16. The apparatus according to claim 13, wherein said
- 30 data existence determination unit determines whether an interval is an interval in which data is being transmitted based upon TFCI information that has been demodulated by said modem.
- 17. The apparatus according to claim 13, wherein said
- 35 second target-SIR controller sets the target error rate of the pilot in such a manner that synchronism between the transmitting and receiving sides will not be lost when said second target-SIR controller has lowered the target SIR upon comparing the measured error rate of
- 40 the pilot and target error rate of the pilot.
- 18. The apparatus according to claim 13, wherein said second target-SIR controller provides upper and lower limits of the target error rate of the pilot and controls the target SIR in such a manner that the

measured error rate of the pilot will fall within a range defined by said upper and lower limits.

19. The apparatus according to claim 13, further comprising storage means for storing target SIR that  
5 prevails before a changeover is made from the control in the interval in which data is being transmitted to the control in the interval in which data is not being transmitted.

20. The apparatus according to claim 13, further  
10 comprising storage means for storing target SIR prevailing when the measured error rate of the pilot has attained the target error rate, after the changeover is made to the control in the interval in which data is not being transmitted.

21. The apparatus according to claim 19, wherein the  
15 difference between target SIR prevailing when the measured error rate of the pilot has attained the target error rate and the stored target SIR is stored after the changeover is made to the control in the  
20 interval in which data is not being transmitted.

22. The apparatus according to claim 19, wherein said  
25 second target-SIR controller sets the stored SIR as target SIR when a changeover is made from the control in the interval in which data is not being transmitted to the control in the interval in which data is being transmitted.

23. The apparatus according to claim 20 or 21, wherein  
30 when the change is made from the control in the interval in which data is not being transmitted to the control in the interval in which data is being transmitted, said second target-SIR controller sets, as the target SIR, a value obtained by adding the absolute value of the difference between the two stored target  
35 SIRs or the absolute value of the stored difference to the target SIR that prevailed prior to the changeover of control.

24. A receiving apparatus for controlling a  
40 transmitter so as to make a measured reception quality approach a target quality, comprising:  
an extraction unit for extracting format information of a received receive signal; and  
a controller for controlling the target quality based upon a pilot signal if a data signal is not contained in a prescribed receive interval and the

pilot signal is contained in said interval based upon  
format information of a received receive signal, and  
controlling the target quality based upon a data signal  
if the data signal is contained in the prescribed  
5 receive interval.